REMARKS

To expedite the prosecution of this application, Applicant amends claims 15, 17, 18, 19, 20, 21, 23, 24, 25, 26, and 27 to incorporate amendments made during prosecution of the parent reissue-application and to incorporate further amendments to correct minor grammatical errors.

Applicant provides new claims 28-38 corresponding to those submitted in a response to the first office action in the parent reissue-application, but with amendments made to correspond to claim 15.

Now pending in this application are

1. claims 15, and 17-22;

2. claims 23 and 25;

3. claim 26;

4. claim 27;

5. claims 28-32, and

6. claims 33-38.

Of these, claims 15, 23, 26, 27, 28, and 33 are independent.

Applicant requests consideration of only those claims subject to rejection under 35 U.S.C. §251 in the parent reissue-application[1]. Accordingly, in an earlier preliminary amendment, Applicant cancelled, without prejudice, claims 1-14, the patentability of which has been confirmed in the parent reissue-application.

The Examiner is requested to confirm that a 37 CFR 1.177 letter issued by the Special Program Law Office is present in each divisional reissue-application file, so that the parent reissue-application may proceed immediately to issue (see MPEP §1451).

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[1] Application No. 08/122,934, filed September 17, 1993

REJECTION UNDER 35 U.S.C. §251

Claims 15 and claims 17-40 were rejected during prosecution of the parent of this application under 35 U.S.C. §251 as attempting to recapture subject matter surrendered in the application for the *Cantoni* '166, the patent whose reissue is sought. The following comments are directed in particular to claim 15 of the present application, which corresponds generally to original claim 1 of the *Cantoni* '166 patent with the changes at issue under 35 U.S.C. §251. Claim 15 is exemplary of the other independent claims under rejection. The arguments made with respect to claim 15 will therefore apply to these other claims.

As noted by the Examiner, Applicant proposes modifying the scope of the invention defined in claim 1 of the original *Cantoni* '166 patent by introducing new limitations in this broadening reissue-application. For example, in claim 15, a new limitation previously recited in claim 2, replaces a limitation added during prosecution of the original *Cantoni* '166 patent. Meanwhile, another limitation added during prosecution of the original *Cantoni* '166 patent is retained. We submit that this proposed modification of the claim does not result in impermissible recapture of the subject matter previously surrendered by amendment of claim 1, and, therefore, this divisional reissue-application of the *Cantoni* '166 patent should be granted.

Prosecution of Claim 1 in *Cantoni* '166 Patent

As filed in the application resulting in the *Cantoni* '166 patent, claim 1 reads as follows:

1. A method of transmitting variable length messages (20) on a network from a source (42) to a destination (46) in fixed length slots (32) which include a header field (34, 36, 38) and a message segment (40), said method including the steps of:

> providing a source identifier field (38) in the header field of each slot, said source identifier field including a source identifier code (SI) which is uniquely associated with the message (20) to be transmitted,

> transmitting the slots to the network, and

> controlling the reassembly of slots (32) at the destination in accordance with the source identifier codes (SI) of the slots (32) received at the destination.

In the first office action[2], the Examiner rejected claim 1 as being anticipated by *Bryant*.[3]

In response[4], Applicant amended claim 1 by introducing two additional steps: (1) the step of segmenting each message into a plurality of fixed length slots (the "segmenting step"), and (2) the step of entering the destination address in the message segment of the first slot (the "entering step"). In the accompanying remarks[5], Applicant distinguished their invention over *Bryant* as follows:

> The patent *Bryant*...does not disclose or suggest segmenting each message...and entering the destination address...Instead, *Bryant et al.* '889 disclose a system and method for synchronizing variable length messages within a local network wherein the receiver and transmitter communicate with one another to coordinate the transmission which is carried out in the form of fixed length data packets. Fig. 6 of the reference shows the format of the fixed length data packet utilized. It will be appreciated that each of the data packets includes the full source and destination addresses. Such source and destination addresses can be quite lengthy, and typically may take up to 48 bits each. In contrast, according to Applicants' invention as now claimed, each of the fixed length slots has a unique source identifier code which is much shorter in length than the address bits. This configuration enables a considerable savings in overheads *[sic]*, as discussed in the instant specification at pages 3-4. Furthermore, according to Applicants' invention as now claimed, the destination address is implemented in the first information segment of the fixed length slot which is segmented. The destination address of the instant invention is not carried in the header of each data packet as required in the *Bryant et al.* '889 system.

The claim, as then amended, read as follows:

1. A method of transmitting variable length messages [(20)] on a network from a source [(42)] having a source address to a destination [(46) in fixed length slots (32) which include a header field (34, 36, 38) and a message segment (40)] having a destination address, said method including the steps of:

   segmenting each message into a plurality of fixed length slots including a first slot, continuing slots, and a last slot, each of said slots including a header field which includes a source identifier field, which is substantially short than said destination address, and a message segment;

   providing a source identifier [field (38)] code in the source identifier field, [header field of each slot, said source identifier field including a] each source identifier code [(SI) which is] being uniquely associated with the message [(20)] to be transmitted[,];

   entering said destination address in the message segment of said first slot;

   transmitting the slots [(32)] on the network[,]; and

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[2] *Office Action* mailed on June 19, 1990, page 3.
[3] *Bryant* et al., U.S. Patent No. 4,410,889 for "System and Method for Synchronizing Variable Length Messages in a Local Area Network Data Communication System," issued October 18, 1983, Figure 6.
[4] *Response* mailed on December 19, 1990, pages 1-2.
[5] *Response* mailed on December 19, 1990, pages 8-9.

controlling [the] reassembly of slots [(32)] at the destination in accordance with the source identifier <u>code</u> [codes (SI)] of [the] slots [(32)] received at the destination.

This amended claim ultimately issued as claim 1 of the *Cantoni* '166 patent. The Office recently confirmed the patentability of this claim in a continuation of the parent reissue-application.

Proposed Amendment of Claim 15

As the Examiner observed in the continuation of the parent reissue-application, Applicant proposes to substitute two new limitations (the "providing step" and the "entering step" as recited below) previously found in claim 2 of the issued *Cantoni* '166 patent, in place of the entering step, while retaining the segmenting step. The providing step reads as follows:

providing a type field in the header slot of each slot, and

and the entering step reads as follows:

coding into the type field a code selected from a first code, a second code, and a third code, respectively representing a beginning of message, a continuation of message, or an end of message, and controlling the reassembly of received slots at the destination in accordance with said identifier codes and the first code, the second code, and the third code;

Bryant is distinguished by the segmenting step

In the amendment of claim 1 of the application resulting in the *Cantoni* '166 patent, only the segmenting step was necessary for distinguishing the Applicant's invention over *Bryant*.

Bryant teaches a data packet having a header with a source identifier field ("Source NID") and a destination identifier field ("Destination NID").[6] Both the source identifier field and the destination identifier field *have the same length*, namely 6 bytes[7]. Assuming the standard 8 bits per byte, the 6 byte length is consistent with Applicant's remarks[8] that "source and destination addresses can be quite lengthy, and typically may take up to 48 bits each."

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[6] *Bryant*, FIG. 6
[7] *Bryant*, see table at col. 7, lines 30-31.
[8] *Response* mailed on December 19, 1990, page 9, lines 6-8.

In contrast, the segmenting step of Applicant's invention recites a header having "a source identifier field, which is *substantially shorter* than the destination address." Thus the segmenting step, by itself, fully distinguished Applicant's invention over the teaching of *Bryant*.

The entering step is superfluous to distinguishing over *Bryant*

In *In re Richman*,[9] the Court held that a claim limitation that is not necessary to distinguish over the prior art can be removed without violation of the doctrine against recapture:

> "[W]e therefore find neither decision [referring to *In re Wesseler*[10] and *Shepard v. Carrigan*[11]] to be authority for the proposition that a limitation added to a claim in obtaining its allowance cannot be broadened, under present statutory law, by reissue if the limitation turns out to be more restrictive than the prior art required. Certainly, one might err without deceptive intention in adding a particular limitation where a less specific limitation regarding the same feature, or an added limitation relative to another element, would have been sufficient to render the claims patenable over the prior art."

Applicant submits that, in this case, addition of the entering step was unnecessary to distinguish their invention over *Bryant*, and that this limitation may therefore be removed as being more restrictive than required to distinguish over the prior art.

No recapture where claim is narrowed by an additional limitation

The proposed claim includes two additional limitations, namely the providing step and the entering step. Therefore, the proposed claim is narrower in scope than claim 1 of the *Cantoni* '166 patent, even with removal of the entering step. As held in *Ball v. United States*,[12] "[t]he proper focus is on the *scope* of the claims, not on the individual *feature* or *element* purportedly given up during prosecution." [emphasis in original]

For the reasons set forth above, we submit that claims 15 and 17-33 do not violate the doctrine against recapture. Accordingly, Applicant requests reconsideration of the section 251 rejection.

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[9] *In re Richman*, 409 F.2d 269, 274-275 (CCPA 1969).
[10] *In re Wesseler*, 367 F.2d 838.
[11] *Shepard v. Carrigan*, 116 U.S. 593 (1886).
[12] *Ball v. United States*, 729 F.2d 1429, 1437 (Fed. Cir. 1984).

REJECTION UNDER 35 U.S.C. §103(*a*)

In the parent continuation reissue-application, claims 23 and 25-28 were also rejected under 35 U.S.C. §103(a) as being obvious over *Weir et al.*[13] in view of *Dretzka.*[14]

As set forth in the Examiner's Interview Summary Record of January 8, 2001, in the continuation of the parent reissue-application, "The Examiner agrees that the claims are distinct from the teaching of *Weir et al.* patent." Applicant submits further that the teaching of *Dretzka*, whether taken alone or combined with that of *Weir* in the manner proposed by the Examiner, does not teach or suggest the claimed subject matter. Applicant therefore requests withdrawal of the rejection of claims 23 and 25-28 under 35 U.S.C. §103(a).
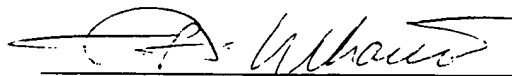
CONCLUSION

We submit that the pending claims are now in condition for allowance, and request early favorable action. Please charge a $204.00 amount to Deposit Account No. 06-1050 for excess claims.

Attached is a marked-up version of the changes being made by the current amendment.

Respectfully submitted,

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[13] *Weir et al.*, U.K. Patent 1,427,622 for IMPROVEMENTS IN OR RELATING TO TRANSMISSION SYSTEMS.
[14] *Dretzka et al.*, U.S. Patent 4,703,475, issued October 27, 1987 for DATA COMMUNICATION METHOD AND APPARATUS USING MULTIPLE PHYSICAL LINKS.

Version with markings to show changes made

In the claims:

Claims 16 and 24 have been cancelled.

Claims 15, 17-23, and 25-27 have been amended as follows:

15.   (Amended) A method of transmitting variable length messages on a network from a
       source to a destination [in fixed length slots that include a header field and a message
       segment], said method comprising [including the steps of]

           segmenting each message into a plurality of fixed length slots, each of which slots
               includes a header field and a message segment,

           providing a source identifier field in the header field of each slot, said source identifier
               field including a source identifier code that is uniquely associated with the message
               to be transmitted,

           transmitting the slots on the network, [and]

           [controlling the reassembly of slots at the destination in accordance with the source
               identifier codes of the slots received at the destination]

           providing a type field in the header of each slot,

           coding into the type field, a code selected from a first code, a second code, and a third
               code, respectively representing a beginning of a message, a continuation of a
               message, and an end of a message, and

           controlling the reassembly of received slots at the destination in accordance with said
               source identifier codes, the first code, the second code, and the third code.

17.   (Twice Amended) A method as claimed in claim 15, further comprising

checking a destination address field associated with the message, [wherein the message includes a destination address field that is checked] for a match with an address associated with the destination, and

transmitting the destination [wherein the] address field [is transmitted] in the message segment of the first slot of [used to transmit] the message.

18. (Amended) A method as claimed in claim 15 [17], further comprising [wherein the method includes the step of] storing message segments associated with a single message in a buffer.

19. (Amended) A method as claimed in claim 18, wherein

[if said first code is detected at the destination,] providing the source identifier code [is inputted] to a comparator in response to detection of said first code at said destination, and

[if a] in response to detection of the second code associated with a subsequently received slot, providing [is detected] the source identifier thereof [is also inputted] to the comparator to check for a match, and

[if a match occurs] storing the message segment of the subsequently received slot [is stored] in said buffer in response to detection of a match.

20. (Amended) A method as claimed in claim 19, further comprising outputting [wherein if said third code is detected] the reassembled [message] slots in the buffer [is outputted] from the buffer as a reassembled message in response to detection of said third code.

21. (Amended) A method as claimed in claim 15, further comprising [16 including the step of]

coding, into the type field, a fourth code representing a single segment message, and

if said fourth code is detected in a slot received at the destination, <u>storing</u> the message segment thereof [is stored] in a single segment buffer.

22. **(Amended)** A method as claimed in claim **20**, <u>further comprising</u> [including the step of]

providing multiple comparators and buffers at the destination so as to enable simultaneous receipt of a plurality of messages, each having its own source identifier code, <u>and</u>

<u>storing</u> the message segments of each message [being stored] in respective buffers.

23. **(Amended)** Apparatus for transmitting variable length messages on a network from a source to a destination in fixed length slots, said apparatus including;

a segmentation machine for segmenting the messag<u>es</u> into fixed length slots, <u>each of which includes</u> [that include] a header field and a message segment, said <u>segmentation</u> machine including coding means

for providing a source identifier field in the header of each slot, said source identifier field including a source identifier code that is uniquely associated with the message to be transmitted, and

<u>for providing a type field in the header field of each slot, and</u>

<u>for providing a code selected from a first code, a second code, and a third code representing, respectively, a beginning of a message, a continuation of a message and an end of a message; and</u>

a reassembly machine located, in use, at the destination, said reassembly machine including control means for controlling reassembly of <u>the</u> slot<u>s</u> in accordance with the source identifier codes of the slots<u>, said control means being responsive to said source identifier code, said first code, said second code, and said third code</u>.

25. **(Twice Amended)** Apparatus as claimed in claim **23** wherein the message includes a destination address field and wherein the segmentation machine is arranged to transmit the destination address field in the message segment of the first slot of the message.

26. **(Amended)** A method of transmitting a variable-length message[s] on a network from a source having a source address to a destination having a destination address, said method comprising [including the steps of]:

segmenting [each] the variable-length message into a plurality of fixed length slots including a first slot, continuing slots, and a last slot, each of said fixed length slots including

a header field that includes a source identifier field, [which is] the source identifier field being substantially shorter than said destination address, and

a message segment;

providing a source identifier code[,] in the source identifier field, [each] said source identifier code being uniquely associated with the variable-length message [to be transmitted];

providing a type field in the header of each slot,

coding, into the type field, a code selected from:

a first code representing a beginning of a message,

a second code representing a continuation of a message, and

a third code, representing an end of a message;

transmitting the slots on the network; and

controlling reassembly of slots at the destination in accordance with the source identifier code, first code, second code, and third code of slots received at the destination.

27. **(Amended)** Apparatus for transmitting variable length messages on a network from a source having a source address to a destination having a destination address in fixed length slots, said apparatus including:

a segmentation machine for segmenting each message into a plurality of fixed length slots including a first slot, continuing slots, and a last slot, each of said slots including

a header field that includes a source identifier field, the source identifier field being [that is] substantially shorter than said destination address,

and a message segment;

coding means for providing [a] the source identifier field with [including] a source identifier code that is uniquely associated with the message to be transmitted for providing a type field in the header field of each slot, and for providing a code selected from a first code, a second code, and a third code representing, respectively, a beginning of a message, a continuation of a message and an end of a message; and

a reassembly machine located, in use, at the destination, said reassembly machine including control means for controlling reassembly of slots in accordance with the source identifier codes, the first code, the second code, and the third code of the slots.